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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/568,698	02/17/2006	Jean-Claude Vuillermoz	Serie 6304	4492

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EXAMINER

GAWORECKI, MARK R

ART UNIT PAPER NUMBER

2884

DATE MAILED: 09/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/568,698

Applicant(s)

VUILLERMOZ ET AL.

Examiner

Mark R. Gaworecki

Art Unit

2884

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 9-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9-15 is/are rejected.
- 7) ☒ Claim(s) 16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>21 July 2006</u>  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 9, 10, and 12-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Grant *et al.* (WO 03/060480 A1).

With respect to claim 9, Grant *et al.* shows a method and apparatus for measuring the quantity of flue gases in a gas output by an electric arc furnace (page 1, "field of the invention"). Further, Grant *et al.* shows the gas to be lowered to a temperature of 300°C or below (page 12, lines 19-24), after which the quantity of CO and/or CO<sub>2</sub> is measured by means of a diode laser through the gas (page 1, "field of the invention").

With respect to claim 10, Grant *et al.* shows the measurement of several species of gas including CO, O<sub>2</sub>, H<sub>2</sub>O, and CO<sub>2</sub> (page 8, lines 1-4).

With respect to claims 12-14, Grant *et al.* uses a tunable diode laser or near-infrared (which includes the 1581 nanometer wavelength) laser (NDIR) for analyzing the gas (page 13, lines 12-13).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 11 rejected under 35 U.S.C. 103(a) as being unpatentable over Grant *et al.* (WO 03/060480 A1) in view of Von Drasek *et al.* (US 2003/0132389).

With respect to claim 11, the gas monitoring method of Grant *et al.*, as applied to claim 9 above, fails to use a diode laser to measure the temperature of a gas in addition to the concentration of a species of gas. Von Drasek *et al.* uses a diode laser to measure both the temperature of a gas and the concentration of CO present in the gas (abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to measure the temperature as well as the concentration of a particular component of the gas in order to provide reliable, real-time monitoring of changing concentrations of CO in the system (Von Drasek, paragraph [0004]).

5. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grant *et al.* (WO 03/060480 A1), in view of Jarolics (4,490,429).

With respect to claim 15, the gas monitoring method of Grant *et al.*, as applied to claim 9 above, shows a probe with axial symmetry (elongate probe, 40), but fails to show a part that can move about the axis of symmetry to remove the impurities that have build up on the internal wall of the probe. The gas

sampling system of Jarolics describes dust activation devices which include mandrels which rotate and remove impurities from the internal wall (column 3, lines 44-59). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use mechanical means for removing clogs in order to keep the probe clean, without having to disassemble the device.

***Allowable Subject Matter***

6. Claim 16 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter:

With respect to claim 16, the combination of Grant *et al.* and Jarolics as applied to claim 15 above, fails to include additional compressed air unclogging means in addition to a rotating part for removing impurities from the internal probe walls.

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Pat. App. Pub. 2003/0160174 to Grant *et al.* (U.S. Publication of WO 03/060480 A1)


U.S. Pat. 7,022,992 to Grant *et al.* (U.S. Pat. Issued for WO 03/060480 A1)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark R. Gaworecki whose telephone number is (571) 272-8540. The examiner can normally be reached on Monday through Thursday, 7:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MG  
31 August 2006



DAVID PORTA  
SUPERVISORY PATENT EXAMINER  
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